AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method ~~in an Internet Protocol (IP) based router, the method~~ comprising:

executing, by an Internet Protocol (IP) based router, a declaration command stored in a configuration file stored in the router and that specifies an address prefix identifier and at least one of an address prefix value associated with the address prefix identifier or a source for the address prefix value, the address prefix identifier a non-numeric representation of an address prefix required as an operand in at least one stored router command in the configuration file, the executing of the declaration command further including storing in the router the address prefix value into a prescribed storage location that is assigned to the address prefix identifier;

parsing, by the router, a router command stored within the configuration file of the router and that specifies [[an]] the address prefix identifier;

retrieving by the router the [[an]] address prefix value for the address prefix identifier from the prescribed storage location assigned to the address prefix identifier; and

executing the router command within the router based on applying the address prefix value retrieved from the prescribed storage location as [[an]] the operand in the router command.

2. (CURRENTLY AMENDED) The method of claim 1, ~~further comprising~~ wherein the executing of the declaration command further includes:

sending an address prefix request to a prefix delegation requesting client in the router for retrieval of the address prefix value in response to determining the source specifies prefix delegation;

sending by the prefix delegation requesting client a prefix request according to a prescribed protocol to an authoritative source in response to the address prefix request; and

receiving, according to [[a]] the prescribed protocol, the address prefix value for use by the router via an IP link from [[an]] the authoritative source, the authoritative source authorized to assign the address prefix value to the router~~, and~~

~~storing the address prefix value internally within the router in a prescribed location~~

~~associated with the address prefix identifier~~.

3. (CURRENTLY AMENDED) The method of ~~claim 2, wherein the receiving step includes generating a request from the authoritative source for the address prefix value based on~~ claim 1, further comprising:

sending an address prefix request to a prefix delegation requesting client in the router for retrieval of the address prefix value in response to a determined absence of the address prefix value in the prescribed location;

sending by the prefix delegation requesting client a prefix request according to a prescribed protocol to an authoritative source in response to the address prefix request;

receiving, according to the prescribed protocol, the address prefix value via an IP link from the authoritative source, the authoritative source authorized to assign the address prefix value to the router; and

storing the address prefix value received via the IP link into the prescribed storage location.

4. (CURRENTLY AMENDED) The method of claim 1, further comprising:

receiving a new address prefix value to be applied in executing the address prefix identifier ~~executed~~ in the router command; and

updating [[a]] the prescribed storage location, associated with the address prefix identifier and that specifies the address prefix value, to also include the new address prefix value;

wherein the executing step includes applying at least one of the address prefix value [[and]] or the new address prefix value as the operand.

5. (ORIGINAL) The method of claim 4, wherein the receiving step includes detecting a specified expiration event associated with the address prefix value, the executing step including not applying the address prefix value after the corresponding specified expiration event.

6. (ORIGINAL) The method of claim 5, wherein the executing step includes executing the router command for each of the address prefix value and the new address prefix value, based on the executing step being performed before the specified expiration event.

7. (ORIGINAL) The method of claim 1, wherein the executing step includes:

detecting within the router command an address prefix mask and an address suffix for specifying a router interface; and

generating an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.

8. (CURRENTLY AMENDED) An Internet Protocol (IP) based router comprising:

a routing configuration file configured for storing router commands each specifying an address prefix identifier that is a non-numeric representation of an address prefix required as an operand, the router commands including a declaration command specifying the address prefix identifier and at least one of an address prefix value associated with the address prefix identifier or a source for the address prefix value, the router commands further including a second router command at least one router command specifying [[an]] the address prefix identifer identifier as an operand for a prescribed operation;

a memory configured for storing at least the [[an]] address prefix value at a prescribed storage location associated with the address prefix identifier;

a processor configured for associating the prescribed storage location with the address prefix identifier and storing the address prefix value into the prescribed storage location in response to executing the declaration command, the processor further configured for executing the second router command based on retrieving the address prefix value from the prescribed storage location in response to detecting the address prefix identifier and applying the address prefix value as an operand in the second router command; and

an interface configured for routing an IP packet according to execution of the second router command.

9. (CURRENTLY AMENDED) The router of claim 8, wherein:

the interface comprises a prefix delegation requesting client configured for sending a prefix request according to a prescribed protocol to an authoritative source in response to receiving an address prefix request from the processor, the processor configured for sending the address prefix request to the prefix delegation requesting client in response to detecting during execution of the declaration command that the source specifies prefix delegation;

the interface is prefix delegation requesting client configured for receiving the address prefix value via an IP link from [[an]] the authoritative source according to [[a]] the prescribed protocol executed by the prefix delegation requesting client processor, the processor configured for storing the address prefix value obtained by the prefix delegation requesting client into [[in]] the memory at [[a]] the prescribed storage location associated with the address prefix identifier.

10. (CURRENTLY AMENDED) The router of claim 9, wherein the processor further is configured for generating a request to the prefix delegation requesting client to generate a second request from the authoritative source for the address prefix value based on a determined absence of the address prefix value in the prescribed storage location.

11. (CURRENTLY AMENDED) The router of claim [[8]] 9, wherein:

the interface prefix delegation requesting client is configured for receiving a new address prefix value to be applied in executing the address prefix identifier executed in the second router command; and

the processor is configured for updating [[a]] the prescribed storage location in the memory, associated with the address prefix identifier and that specifies the address prefix value, to also include the new address prefix value, the processor configured for applying at least one of the address prefix value [[and]] or the new address prefix value as the operand.

12. (ORIGINAL) The router of claim 11, wherein the processor, in response to detecting

a specified expiration event associated with the address prefix value, selectively avoids applying the address prefix value after the corresponding specified expiration event.

13. (CURRENTLY AMENDED) The router of claim 12, wherein the processor is configured for executing the <u>second</u> router command for each of the address prefix value and the new address prefix value, based on determining that execution thereof is being performed before the specified expiration event.

14. (CURRENTLY AMENDED) The router of claim 8, wherein the processor, in response to detecting within the <u>second</u> router command an address prefix mask and an address suffix for specifying a router interface, generates an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.

15. (CURRENTLY AMENDED) A computer readable medium having stored thereon sequences of instructions for routing packets by an Internet Protocol (IP) based router, the sequences of instructions including instructions for:

<u>executing, by the router, a declaration command stored in a configuration file stored in the router and that specifies an address prefix identifier and at least one of an address prefix value associated with the address prefix identifier or a source for the address prefix value, the address prefix identifier a non-numeric representation of an address prefix required as an operand in at least one stored router command in the configuration file, the executing of the declaration command further including storing in the router the address prefix value into a prescribed storage location that is assigned to the address prefix identifier;</u>

parsing, <u>by the router,</u> a router command <u>stored within the configuration file of the router and</u> that specifies [[an]] <u>the</u> address prefix identifier;

retrieving <u>by the router the</u> [[an]] address prefix value for the address prefix identifier <u>from the prescribed storage location assigned to the address prefix identifier;</u> and

executing the router command <u>within the router</u> based on applying the address prefix

value <u>retrieved from the prescribed storage location</u> as [[an]] <u>the</u> operand in the router command.

16. (CURRENTLY AMENDED) The medium of claim 15, ~~further comprising~~ ~~instructions for~~ <u>wherein the executing of the declaration command further includes</u>:

<u>sending an address prefix request to a prefix delegation requesting client in the router for retrieval of the address prefix value in response to determining the source specifies prefix delegation;</u>

<u>sending by the prefix delegation requesting client a prefix request according to a prescribed protocol to an authoritative source in response to the address prefix request; and</u>

receiving, according to [[a]] <u>the</u> prescribed protocol, the address prefix value for use by the router via an IP link from [[an]] <u>the</u> authoritative source, <u>the authoritative source</u> authorized to assign the address prefix value to the router~~; and~~

~~storing the address prefix value internally within the router in a prescribed location associated with the address prefix identifier~~.

17. (CURRENTLY AMENDED) The medium of ~~claim 16, wherein the receiving step includes generating a request from the authoritative source for the address prefix value based on~~ claim 15, further comprising:

<u>sending an address prefix request to a prefix delegation requesting client in the router for retrieval of the address prefix value in response to</u> a determined absence of the address prefix value in the prescribed location<u>;</u>

<u>sending by the prefix delegation requesting client a prefix request according to a prescribed protocol to an authoritative source in response to the address prefix request;</u>

<u>receiving, according to the prescribed protocol, the address prefix value via an IP link from the authoritative source, the authoritative source authorized to assign the address prefix value to the router; and</u>

<u>storing the address prefix value received via the IP link into the prescribed storage location</u>.

18. (CURRENTLY AMENDED) The medium of claim 15, further comprising instructions for:

receiving a new address prefix value to be <u>applied in executing the address prefix identifier</u> ~~executed~~ in the router command; and

updating [[a]] <u>the prescribed</u> storage location, associated with the address prefix identifier and that specifies the address prefix value, to <u>also</u> include the new address prefix value;

wherein the executing step includes applying at least one of the address prefix value [[and]] <u>or</u> the new address prefix value as the operand.

19. (ORIGINAL) The medium of claim 18, wherein the receiving step includes detecting a specified expiration event associated with the address prefix value, the executing step including not applying the address prefix value after the corresponding specified expiration event.

20. (ORIGINAL) The medium of claim 19, wherein the executing step includes executing the router command for each of the address prefix value and the new address prefix value, based on the executing step being performed before the specified expiration event.

21. (ORIGINAL) The medium of claim 15, wherein the executing step includes:

detecting within the router command an address prefix mask and an address suffix for specifying a router interface; and

generating an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.

22-28. (CANCELED).

29. (NEW) An apparatus comprising:

means for storing router commands each specifying an address prefix identifier that is a non-numeric representation of an address prefix required as an operand, the router commands

including a declaration command specifying the address prefix identifier and at least one of an address prefix value associated with the address prefix identifier or a source for the address prefix value, the router commands further including a second router command specifying the address prefix identifier as an operand for a prescribed operation, the means for storing further configured for storing at least the address prefix value at a prescribed storage location associated with the address prefix identifier; and

means for associating the prescribed storage location with the address prefix identifier and storing the address prefix value into the prescribed storage location in response to executing the declaration command, the means for associating further configured for executing the second router command based on retrieving the address prefix value from the prescribed storage location in response to detecting the address prefix identifier and applying the address prefix value as an operand in the second router command, the means for associating further configured for routing an IP packet according to execution of the second router command.

30. (NEW) The apparatus of claim 29, wherein:

the means for associating includes a prefix delegation requesting client configured for sending a prefix request according to a prescribed protocol to an authoritative source in response to an address prefix request generated by the means for associating, the means for associating generating the address prefix request in response to detecting during execution of the declaration command that the source specifies prefix delegation;

the prefix delegation requesting client configured for receiving the address prefix value via an IP link from the authoritative source according to the prescribed protocol executed by the prefix delegation requesting client, the means for associating configured for storing the address prefix value obtained by the prefix delegation requesting client into the prescribed storage location associated with the address prefix identifier.

31. (NEW) The apparatus of claim 30, wherein the means for associating further is configured for generating a request to the prefix delegation requesting client to generate a second

request from the authoritative source for the address prefix value based on a determined absence of the address prefix value in the prescribed storage location.

32. (NEW) The apparatus of claim 30, wherein:

the prefix delegation requesting client is configured for receiving a new address prefix value to be applied in executing the address prefix identifier in the second router command; and

the means for associating is configured for updating the prescribed storage location in the memory, associated with the address prefix identifier and that specifies the address prefix value, to also include the new address prefix value, the means for associating configured for applying at least one of the address prefix value or the new address prefix value as the operand.

33. (NEW) The apparatus of claim 32, wherein the means for associating, in response to detecting a specified expiration event associated with the address prefix value, selectively avoids applying the address prefix value after the corresponding specified expiration event.

34. (NEW) The apparatus of claim 33, wherein the means for associating is configured for executing the second router command for each of the address prefix value and the new address prefix value, based on determining that execution thereof is being performed before the specified expiration event.

35. (NEW) The apparatus of claim 29, wherein the means for associating, in response to detecting within the second router command an address prefix mask and an address suffix for specifying a router interface, generates an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.